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Specific Aims were to (1) develop and pilot test an intervention to facilitate informed decision-making about prostate cancer screening, (2) measure intervention impact on screening, and (3) evaluate impact on patient knowledge, attitudes, and beliefs. We hypothesized that exposure to decision counseling would affect prostate cancer screening and related perceptions.

Methods. The study population was 199 men who completed a baseline survey and were randomized into Standard Intervention (SI) and Enhanced Intervention (EI) groups. SI Group men received an informational booklet. EI Group men received the booklet plus a decision counseling session with a health educator. The primary outcome was performance of both DRE and PSA tests within six months after the booklet mailing. An endpoint survey measured the participants' knowledge, attitudes, and beliefs about prostate cancer and screening. An endpoint chart audit measured screening outcomes for all participants.

Results. Using the primary outcome, EI Group men were less likely to be screened (8% compared with 12% for SI Group men). This difference was not statistically significant. Of the 100 men in the EI Group, 60 received the decision-counseling session. EI Group men were more likely than SI Group men to believe that men who go through screening would have more problems than men who do not. This difference was marginally significant.

Conclusion. Decision counseling did not affect prostate cancer screening rates but did influence beliefs about screening. Further analysis will examine the predictors of screening, using the demographic and attitudinal items of the baseline survey.

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Introduction

On October 1, 1998 Thomas Jefferson University received a grant from the United States Army Medical Research and Material Command that supported development and testing of a theory-based decision counseling intervention to facilitate value-based decision-making about having a prostate cancer screening examination. The study had three specific aims: (1) develop the intervention, (2) implement the intervention and measure its impact on screening utilization, and (3) assess the effect of the intervention on participants' knowledge, attitudes, beliefs, and behaviors related to prostate cancer and screening. These objectives were accomplished by

- Designing the educational booklet and the counseling session
- Pre-testing the intervention
- Training a health-educator to do decision-counseling
- Recruiting study participants from a large primary care practice
- Administering a baseline survey to study participants
- Assigning participants randomly to either a standard intervention or an enhanced intervention group
- Delivering the interventions
- Administering an endpoint survey
- Completing a medical chart audit data to measure study outcomes
- Analyzing data to assess study outcomes

Body

Background

In the absence of definitive results from clinical trials assessing whether detecting and treating early prostate cancer has an impact on mortality, expert opinion on the subject of prostate cancer screening is currently divided. The American Urological Association and the American Cancer Society recommend that men who are 50 or more years of age and have a life expectancy of 10 or more years should be offered a digital rectal examination (DRE) and a prostate specific antigen (PSA) test on an annual basis and that screening should be considered at an earlier age for men under 50 who are at high risk (i.e., African American men and men with a family history of prostate cancer). They point out that combined DRE and PSA testing is effective at identifying men with early prostate cancer. In addition, they cite evidence that men who are diagnosed with localized prostate cancer and are treated aggressively have higher survival rates as compared to men who are diagnosed with late stage disease.

In contrast, guidelines put forward by the United States Preventive Services Taskforce and the Canadian Taskforce on the Periodic Health Examination do not support routine prostate cancer screening. The American College of Physicians has also recommended against prostate cancer screening among older adult men and has suggested that if screening is performed, men should be advised in advance about the potential benefits and harms of prostate cancer early detection. They argue, however, that no randomized trials have demonstrated a reduction in mortality because of prostate cancer screening. In addition, aggressive treatment for early-stage prostate cancer can cause serious adverse outcomes (e.g., impotence, incontinence, stricture, bowel injury, and even death). It is imperative that men know about the uncertainties surrounding prostate cancer screening before they decide on a course of action.

At the same time, individuals are being asked to assume an increasing level of responsibility for decision-making about personal health care. Patients are now expected to act as partners with health care professionals to engage in "shared decision making" about health-related issues. This shared decision-making paradigm is an ideal that is supplanting the more traditional model in which the medical practitioner assumes responsibility for choosing a health care strategy that is in the best interests of the patient. To facilitate shared decision making, it is important to provide information that is needed to make informed decisions, enable patients to recognize the importance and legitimacy of their role in medical decision making, understand the implications of choosing from among different health care alternatives, and consider their personal values and preferences related to the choices at hand.

Intervention Development

Intervention components

The intervention consisted of a prostate cancer informational booklet and a counseling session with a health educator. The informational booklet, *Is Being Checked for Prostate Cancer a Good Idea or Bad Idea?*, was based on epidemiological and clinical information about prostate cancer and early detection. It described the prostate gland and its function; described risk factors for and symptoms of prostate cancer; explained early detection screening; discussed the pros and cons of screening; and outlined options for early and late prostate cancer treatment.

The research team also developed a counseling protocol that was designed to assist the participant in deciding whether or not to have a prostate cancer screening exam. This process involved identifying factors that might affect their decisions and by generating a decision preference score based on these decision factors. Specifically, study participants were asked to identify criteria that would lead him toward having a screening exam and those that would lead him away from being screened. After reviewing his statements to verify that they were accurately captured, each participant identified and ranked the three most important criteria. He was then asked to make pair-wise comparisons of the

relative importance of those three factors, which the AHP method uses to assign values to the decision factors and calculate a score measuring the participant's preference for or against screening.

Pre-testing the Intervention

An initial draft version of the informational booklet was first reviewed for accuracy by clinicians in the Department of Urology of Thomas Jefferson University. We then field-tested the booklet in face-to-face interviews. A health literacy consultant from the Health Promotion Council of Southeastern Pennsylvania conducted focused interviews with 20 age-eligible male patients from the Jefferson Internal Medicine Associates (JIMA) patient population. The goal of the interviews was to determine whether the men could recognize the purpose of the informational booklet and to ascertain whether they understood the language, terminology, and concepts contained in each component. Most men reported that the text was easy to read and interesting. However, it was suggested that the medical terminology should be simplified and more pictures should be included. Many men said that they thought the purpose of the booklet was to encourage prostate cancer screening. Many disregarded a central message in the booklet, that is, there is a decision to be made about screening. The interviewees also indicated that they would be likely to read the booklet and consider the issue of screening more carefully if they were encouraged to do so by their physician. We modified the educational booklet to address each of these concerns. Men who participated in the interviews were excluded from further participation in the study.

A health educator and a volunteer client recruited from the community made a videotape of a mock decision counseling session. The video was shown to two focus groups of age-eligible men from two community-based primary care physician practices. There were six men in the first group and eight in the second. After viewing the videotape, the focus groups suggested that some print materials be made available before the counseling session to provide basic education about prostate cancer and screening. In addition, the men suggested that the process of eliciting screening decision factors should be simple and direct. They also recommended that the steps involved in computing a decision score, which was done manually with pencil and paper in the videotape, be automated. Finally, the men suggested that the score results should be displayed visually and that a written copy should be provided to the patient. These suggestions were incorporated into the final version of the decision counseling protocol.

According to the final protocol, a health educator meets with the patient and reviews the format and content of the booklet. (S)he then prompts the patient to identify decision factors by asking him to complete the following sentences: "I want to have a prostate screening examination because..." and "I don't want to have a prostate cancer screening examination because". The health-educator then encourages the patient to select and rank the three most important decision factors. At this point, the health educator guides him through the process of pair-wise comparisons among the three factors which assigns values to the individual decision factors in accordance with the AHP method. The health educator calculates the decision preference score using a programmable hand-held calculator and shares this information with the patient. Finally, a screening decision is elicited.

Intervention Implementation

Study Population

The study population was drawn from a sampling frame of 1703 men, aged 50 to 69 years who were patients of Jefferson Internal Medicine Associates (JIMA) in Philadelphia. From this group, 20 men were randomly selected to pretest the intervention. For the study population itself, 550 men were randomly drawn from the sampling frame. Chart audits and initial telephone contacts were conducted in order to determine if they fulfilled additional study eligibility criteria. A total of 221 men were considered ineligible because they had a personal history of prostate cancer or benign prostate hyperplasia, or had had a prostate biopsy or a transrectal ultrasound. Thus, 329 men remained in the study sample.

Baseline Survey

A Baseline Survey questionnaire was developed for administration to the men in the sample. The instrument included items that served to operationalize constructs defined in the Preventive Health Model. This model identifies different sets of factors that influence patient decision-making. Items were included in the survey instrument to measure personal background factors (i.e., socio-demographic characteristics and prostate cancer screening history). In addition, single items were included to measure knowledge about prostate cancer and screening (two single items), self-efficacy (one item), and social support and influence related to screening (two single items). The survey also included items that formed a cognitive scale (i.e., perceived salience and coherence of screening (eight items, α=0.67)), two affective scales (i.e., fear of being diagnosed with prostate cancer (three items, α=0.63) and concern about screening-related risks and benefits (seven items, α=0.62), and an intention scale (i.e., intention to have a screening examination (four items, α=0.89)).

Demographic Characteristics of Study Participants

Telephone and mail approaches were used to administer the Baseline Survey. Of the 329 men who were contacted, 199 (60%) completed a baseline survey. Among responders, 103 men completed the survey by telephone, and 96 completed the survey by mail. The 130 non-responders were either unavailable for contact during the survey field period or declined to participate. Men who completed the Baseline Survey were randomly assigned to either a Standard Intervention (SI) Group (n=99) or an Enhanced Intervention (EI) Group (n=100).

As shown in Table 1, most participants were less than 60 years old, were married, had attended some college, and had been born outside of Philadelphia. A family history of prostate cancer was reported by 9%, while a history of prostate cancer screening (that is, a digital rectal exam (DRE) and a prostate specific antigen (PSA) test) in the previous year was reported by 44%. There were no statistically significant differences between the two study groups.

Table 1. Demographic Characteristics of Study Participants

Characteristic	Total		Enhanced Intervention		Standard Intervention		p< **
	n*	%	n	%	n	%	
Age							0.644
50-59 years	140	70.4	72	72.0	68	68.7	
60-69 years	59	29.6	28	28.0	31	31.3	
Race/ethnicity							0.511
Non-White	48	24.1	22	22.0	26	26.0	
White	151	75.9	73	73.7	78	78.0	
Marital Status							1.000
Married	144	72.7	73	73.0	71	72.4	
Unmarried	54	27.3	27	27.0	27	27.6	

Table 1. Demographic Characteristics of Study Participants							
Characteristic	Total		Enhanced Intervention		Standard Intervention		p< **
	n*	%	n	%	n	%	
Education							0.219
≤ 12 years	60	30.2	26	26.0.0	34	34.3	
> 12 years	139	69.8	74	74.0	65	65.7	
Birthplace							0.322
Philadelphia	90	45.5	49	49.0	41	41.8	
Outside Philadelphia	108	54.5	51	51.0	57	58.2	
Family history of prostate cancer							0.081
Yes	18	9.0	13	13.0	5	5.0	
No	181	91.0	87	87.0	94	95.0	
PSA + DRE in past year							0.154
Yes	87	43.7	49	49.0	38	38.4	
No	112	56.3	51	51.0	61	61.6	

* Counts may not add to full study sample due to missing data.

** Fisher's Exact Test comparing enhanced intervention and standard intervention groups.

Perceptions of Study Participants

Perceptions of study participants are considered as cognitive, affective, social influence, and intention factors.

Cognitive Factor. The overwhelming majority (96%) of participants believed that prostate cancer could be cured if it is detected early. A similar majority (86%) believed that having a family history of prostate cancer increases one's risk for the disease. Most men (95%) thought that it would be easy to rearrange their schedule to be tested (self-efficacy). Survey responders tended to view prostate cancer screening as a salient and coherent preventive health behavior. The median score on this scale was 3.9 (where 4=strongly agree and 1=strongly disagree).

Affective Factor. Responders had little concern about the physical and emotional discomfort associated with prostate cancer screening. Scoring for these items was reverse coded, so disagreement was reflected in a high scale score. The median score was 3.5 (where 4=strongly agree and 1=strongly disagree).

The second affective scale was fear of being diagnosed with prostate cancer. Most men did not exhibit this concern, as indicated by a median score of 1.7 (where 4=strongly agree and 1=strongly disagree).

Social Influence Factor. Four single items assessed the social influence of physicians and family members on their health decisions. Most respondents agreed that they wanted to do what their doctor thought they should do about prostate cancer screening (93%), that their doctor wanted them to be

screened for prostate cancer (93%), and that they wanted to do what family members thought they should do (59%), and family members would want them to be screened (87%).

Intention Factor. Intention to have a prostate cancer screening examination was high. The median score on this scale was 3.5 (where 4=strongly agree and 1=strongly disagree).

Delivering the Intervention

The men in both the SI and EI Groups were mailed a copy of a prostate cancer informational booklet. In addition to receiving the booklet, men in the EI Group were contacted by a project health educator to arrange for a decision counseling session, which was scheduled at the convenience of the participant, either face-to-face in the primary care practice or by telephone. A total of 60 men completed a decision counseling session. For 24 of these men, the decision-counseling was delivered in a face-to-face interview session; and for 36 men, the session was conducted by telephone. Forty men did not participate in the decision counseling session for the following reasons: unavailable or could not be reached to schedule a session (n=8), refused to participate (n=9), diagnosed recently with prostate cancer or BPH or had had a recent prostate cancer screening exam (n=20), and failed to keep their appointments (n=3). There were no statistically significant demographic differences between the men who participated in the decision counseling session and those who did not.

Decision Counseling Session Results

Decision Factors

During the counseling session, a project health educator encouraged participants to identify as many reasons as possible that might affect their decision regarding prostate cancer screening. These reasons were later coded and grouped into three domains: (1) cognitive reasons to and not to screen; (2) affective reasons to and not to screen; and (3) social influence reasons to and not to screen.

Cognitive reasons to screen were cited by 80% of the men, while cognitive reasons *not* to screen were cited by 38%. The view that screening could lengthen their lives was the most widely cited positive reason. Other positive reasons included the belief that screening could increase one's quality of life and could find the cause of current health problems. Cognitive reasons not to screen included the belief that subsequent treatment might create problems like incontinence and impotence and the feeling that screening would take too much time.

Affective reasons to screen were cited by 78% of the men, while affective reasons *not* to screen were cited by 27%. The desire to know if a health problem exists or might develop was the most widely cited positive reason, followed by the wish to resolve concerns about their health status. Affective reasons not to screen were worries that screening might be painful and embarrassing.

Social influence was cited by 63% of the men as a reason to screen, while social influence as a reason *not* to screen was cited by only one person. Men stated that a significant other (physician, family member, or friend) had previously encouraged them to have a screening exam. Social influence reasons not to screen included significant others urging them not to screen.

Preference Related to Screening

Men who participated in the decision counseling session were asked to make pair-wise comparisons of the three most important decision factors on a six-point scale (that is, overwhelmingly more important, very much more important, much more important, somewhat more important, a little bit more important, equally important). They were also asked to make pairwise comparisons of decision factors on a six-point scale according to their relative influence on the decision to or not to screen (that is, overwhelmingly more influence, very much more influence, much more influence, somewhat more influence, a little bit more influence, equally influential). The resulting values were used to compute an overall score measuring each man's preference related to screening. The patients' scores were skewed

toward preferring to screen. That is, 92% expressed a preference to screen and only 8% were either unsure or preferred not to screen.

Intention to Screen

When asked to indicate their current intention regarding prostate cancer screening, 69% of the men stated that they intended to schedule a screening exam, 24% were unsure, and only 7% stated that they did not intend to be screened. Intention was strongly associated with preference score (Fisher's Exact Test, p=0.0002).

Endpoint Chart Audit

Members of the research team visited the JIMA practice in order to perform an Endpoint Chart Audit for each of the study participants.

Performance of both screening DRE and PSA tests within six months after the informational booklet mailing was defined as the **primary outcome**. The booklet was mailed to both study groups. The Endpoint Chart Audit was conducted at least six months after the booklet mailing (median=8 months).

The **secondary outcome** expanded the definition of screening utilization. The secondary outcome was defined as

(1) Performance of a DRE within six months before booklet mailing and a PSA test within six months after booklet mailing OR

(2) Performance of a PSA test within six months period before booklet mailing and a DRE within six months after booklet mailing OR

(3) Performance of a PSA test within six months after booklet mailing OR

(4) Performance of both a DRE and a PSA test within six months after the booklet mailing (that is, the primary outcome)

This definition of the secondary outcome takes into account those men who started the screening process before booklet mailing and completed screening after booklet mailing. It also recognizes that practitioners may consider the PSA test alone to be a sufficient prostate cancer-screening test.

Due to the short interval between the booklet mailing and the chart audit (median=7 months), it is possible that PSA tests were performed but had not yet been entered into the patient chart by the time of the audit.

Primary and Secondary Outcomes

Contingency tables were computed to assess the effect of study group assignment on prostate cancer screening utilization. **Table 2** shows that only 20 men (10%) screened, according to the primary outcome definition. In terms of the secondary outcome definition, 36 men (18%) were considered to have been screened. Men in the Enhanced Intervention (EI) Group were less likely to have a prostate cancer screening examination than their counterparts in the Standard Intervention (SI) Group. The odds ratios were 0.63 for the primary outcome and 0.99 for the secondary outcome.

Table 2. Univariable Analyses of Primary and Secondary Outcomes (N = 199)

Outcome	Screened		Odds Ratio	95% CI	p-value
	n	%			
Primary Outcome					0.357
SI (n=99)	12	12.1	1.00	Reference	
EI (n=100)	8	8.0	0.63	0.21, 1.77	
Secondary Outcome					1.00
SI (n=99)	18	18.2	1.00	Reference	
EI (n=100)	18	18.0	0.99	0.45, 2.17	

SI = Standard Intervention

EI = Enhanced Intervention

P-values were computed by Fisher's Exact Test.

Endpoint Survey

All Baseline Survey responders were mailed an Endpoint Survey. This instrument was shorter than the Baseline Survey, as the research team limited the number of items in order to reduce respondent burden. In addition, a $20 incentive was offered for survey return. A total of 137 men (69%) responded. Survey items included measures of prostate cancer screening knowledge, attitudes toward prostate cancer screening, intention to screen, decisional conflict items, items to measure impressions of the informational booklet and, for the EI Group, items to assess impressions of the decision counseling session.

Perceptions of Study Participants

Cognitive Factor. Almost all respondents stated that experts agreed on recommending prostate cancer screening (97%), that prostate cancer treatment saves lives (98%), and that physicians could distinguish between fast and slow growing cancers (79%). Over three-quarters (78%) of the men knew that prostate cancer treatment can cause impotence and 73% knew that treatment could cause incontinence. Almost everyone believed that prostate cancer can be cured if discovered early (99%) and that the benefits of screening outweighed any difficulties associated with having a screening exam (95%).

Affective Factor. There was strong agreement among the men that those who undergo screening will have no more problems than those who do not will (95%) will. Overwhelmingly, the men felt that the screening decision was easy (93%) that the best choice was clear (96%), and that they were sure of what to do (93%). They knew what their options were (93%) and what the advantages (91%) and disadvantages (80%) were for each option. Furthermore, they felt clear about the importance of the advantages (94%) and the disadvantages (77%) of screening, and which was more important to them (92%). They felt that they had made informed choices (97%) that reflected what was important to them (98%). All of the men were satisfied with their decision and almost all expected to stick with the decision that was made (97%).

Social Influence Factor. Most men (85%) reported that they had discussed prostate cancer screening with a doctor. Of these, 96% indicated that the physician recommended that they be screened.

Intention Factor. Most men (90%) responding to the survey stated that they intended to be screened.

Assessment of Intervention Components

Regarding the informational booklet, 68% of the SI Group remembered receiving the booklet in comparison to 73% of the EI Group. This response is not surprising since the median time from the booklet mailing to the Endpoint Survey mailing was 14 months. Of those who remembered the booklet, 96% reported that they had read it. Of those who read the booklet, 71% felt that it helped them make their decision about screening, and all of them stated that they would recommend the booklet to other men.

Among men in the EI Group, 80% remembered the decision counseling session. The median interval between the counseling session and the Endpoint Survey was 14 months. Of those men who recalled the decision counseling session, 66% thought that it helped them make their decision about having a screening exam, and 98% indicated that they would recommend the session to others.

Intervention Impact on Knowledge, Attitudes, and Beliefs

For all of these outcomes, with the exception of the decision conflict scales, men with missing values for any of them were excluded in order to conduct analyses on the same subjects and thus ensure comparability.

There were no significant differences between the SI and EI Groups on the Knowledge and Decision Conflict Scales, as shown in **Table 3**.

Table 3. Univariable Analyses of Cognitive and Affective Outcomes (Scales) Among Endpoint Survey Responders

Outcome	N	SI Group median	EI Group median	p-value
Cognitive Factors				
Knowledge Scale (0-6)	137	2.0	2.0	.833
Affective Factors				
Decision Conflict Scale (1-3)	112	1.0	1.0	.345
Certainty Subscale	112	1.0	1.0	.688
Information Subscale	111	1.0	1.0	.646
Values Subscale	111	1.0	1.0	.903
Quality Subscale	112	1.0	1.0	.353

SI = Standard Intervention

EI = Enhanced Intervention

P-values and 95% Confidence Intervals were computed from Wilcoxon's Tests.

The data regarding single endpoint survey items presented in **Table 4** show that men in the EI Group were much more likely to believe that men who go through prostate cancer screening will have more problems than men who do not, although the effect was marginally significant.

Table 4. Univariable Analyses of Cognitive, Affective, and Behavioral Outcomes (Single Items) Among Endpoint Survey Responders (n=137)

	Odds Ratio	95% CI	p-value
Cognitive Factors			
Benefits outweigh difficulties			.718
Standard intervention	1.00	Reference	
Enhanced intervention	0.73	0.16, 3.38	
Early prostate cancer curable			1.00
Standard intervention	1.00	Reference	
Enhanced intervention	∞*	0.03, ∞*	
Affective Factors			
Screened men have more problems			.062
Standard intervention	1.00	Reference	
Enhanced intervention	6.58	0.77, 55.6	
Social Influence Factors			
Discussed screening with doctor			.468
Standard intervention	1.00	Reference	
Enhanced intervention	1.61	0.61, 4.24	

Reference = Reference Group

Wald-type confidence intervals and p-values are displayed.

* Infinitely large values due to empty cell.

Key Research Accomplishments

- Design and field-testing of an Educational Booklet
- Development of the Decision Counseling Session Protocol
- Administration of a Baseline Survey to 199 men
- Implementation of the Decision Counseling Session for 60 men in the Enhanced Intervention Group
- Completion of an Endpoint Chart Audit for all 199 study participants
- Administration of an Endpoint Survey to 137 participants
- Analysis of the impact of the Enhanced Intervention on prostate cancer screening utilization
- Analysis of the impact of the Enhanced Intervention on knowledge, attitudes, and beliefs about prostate cancer screening.

Reportable Outcomes

Publications

Myers RE. African American men, prostate cancer early detection examination use, and informed decision-making. Seminars in Oncology 26:375-381, 1999.

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Liberatore MJ, Myers RE, Nydick RL, Steinberg M, Brown ER, Gay R, Powell T, Powell RL. Decision Counseling for men considering prostate cancer screening. Computers & Operations Research. In Press.

Presentations

Liberatore MJ, Nydick RL, Myers RE, Kunkel EJS, O'Connor J, Christian E, Burgh D, Wolf T, Ohene-Frempong J. A decision support system for men considering prostate cancer early detection. Institute for Operations Research and the Management Sciences, Philadelphia, PA, 1999.

Conclusions

We have created a unique informed decision-making intervention, recruited study participants and implemented the intervention for a random sample of them, collected baseline and endpoint survey data, conducted chart audits for the participants, and analyzed this information.

We designed a 13-page booklet summarizing epidemiological and clinical information related to prostate cancer screening. It was reviewed by faculty from the Departments of Radiation Oncology and Urology at Thomas Jefferson University and further developed in face-to-face interviews with 20 patients from Jefferson Internal Medicine Associates. The Commonwealth Division, Inc. of the American cancer Society has adopted the booklet for use in public education. In addition, the Centers for Disease Prevention and Control have requested copies for use in educational outreach.

We successfully recruited and administered a baseline survey to a sample of 199 men. The survey respondents were then randomized into two groups: a Standard Intervention Group, which received an informational booklet, and an Enhanced Intervention Group, which was targeted with the informational booklet and a decision counseling session with a health educator. We were able to deliver the decision counseling session to 60% of the EI Group. For most of these men, the decision counseling session was delivered by telephone. An Endpoint Survey measured post-intervention knowledge, attitudes, and beliefs toward prostate cancer and screening. An Endpoint Chart Audit was conducted to assess the impact of the intervention on behavior.

Using the chart audit data, we analyzed the impact of the enhanced intervention on the screening behavior of the subjects. While the men in the EI Group were somewhat less likely to be screened by either the primary or the secondary definition, the effects were not statistically significant. Among the knowledge, attitudes, and beliefs on the endpoint survey, we found that men in the EI Group were much more likely to believe that men who go through prostate cancer screening will have more problems than men who do not, although the effect was only marginally significant.

Final data analyses will involve identifying predictors of screening utilization from the demographic and attitudinal variables on the baseline survey. We will initially estimate univariable models to discover which variables are associated with screening. These predictors will then be put into a final multivariable model.

References

Not applicable

Appendices

No appendices